

MALIBU UNITES

For Healthy Schools

A PRIMER ON THE HEALTH EFFECTS OF PCBs

AUTISM, BEHAVIORAL DISORDERS, AND COGNITIVE FUNCTION

PCBs are a risk factor for autism and Attention Deficit-Hyperactivity Disorder (ADHD). Pre- and early post-natal exposure to PCBs is associated with retardation of mental and/or motor development, even after adjusting for maternal intelligence and the quality of the home environment. Adolescents with elevated PCB levels do more poorly on cognitive function tests than do adolescents with lower PCB levels.

HEART DISEASE, HYPERTENSION, AND DIABETES

Other than age, total serum PCB concentration is the strongest determinant of whether or not a person will develop hypertension. High PCB levels also increase the risk of cardiovascular disease. Additionally, having elevated PCB levels early in life is predictive of developing diabetes later—in fact, people with high levels of PCBs are up to nine times more likely to be diagnosed with type 2 diabetes than are those who have lower exposure levels.

CANCER

Children's risk of developing acute lymphocytic leukemia increased twofold when PCBs were detected in the dust of a room in which they spent a significant amount of time. For children and adults alike, PCBs act as general cancer promoters, increasing the risk of every kind of cancer.

ASTHMA AND RESPIRATORY FUNCTION

Both adults and children have an increased risk of asthma and infectious respiratory diseases when exposed to PCBs. In New York, those living along the severely PCB-contaminated Hudson River experience higher rates of hospitalizations for chronic respiratory infections, even though they tend to lead healthier lifestyles than other New Yorkers.

PRENATAL AND INFANT EXPOSURE

There is a correlation between prenatal/infant PCB exposure and reduced neonatal height, weight, Apgar scores, gestational age, and body mass index. In Taiwan, there was a marked impairment of neuropsychological development among children whose mothers had been accidentally exposed to high levels of PCBs.

IMMUNE SYSTEM

PCB exposure is associated with increased incidence of infectious and allergic diseases.

ENDOCRINE AND REPRODUCTIVE SYSTEMS

PCB exposure diminishes thyroid function in children—which is linked to impaired neurodevelopment—but may accelerate pubertal onset in both boys and girls. In post-pubescent females, higher PCB levels are suspected to be associated with increased incidence of endometriosis, menstrual irregularity, delayed conception, and miscarriage.

CENTRAL NERVOUS SYSTEM

Exposure to PCBs has been shown to adversely affect psychomotor function, learning, memory, and the growth and function of the central nervous system. These effects may even be evident at low doses.

OTHER HEALTH EFFECTS

PCBs have also been linked to liver disease, hearing loss, and bone tissue alteration. Their effects are worse when inhaled, and they remain in the body for many years after exposure.

If you have any questions or would like more information about anything covered in this fact sheet, please contact Maliub Unites at 310-929-8460